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<b>TRANSMITTAL FORM</b> (to be used for all correspondence after initial filing)	Application Number	09/855,176	
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	First Named Inventor	Edward E. Knaus	
	Art Unit	1635	
	Examiner Name	Richard A. Schnizer	
Total Number of Pages in This Submission	7	Attorney Docket Number	A894605US

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual	D. Doak Horne, Reg. 33,105
Signature	<i>D. Doak Horne</i>
Date	August 26, 2003

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In The Matter of United States Patent Application:

Serial No. : 09/855,176  
Filed : May 14, 2001  
Group Art Unit : 1635  
Examiner : Schnizer, Richard A.  
Title : COMBINED USE OF NUCLEOSIDE ANALOGUES AND GENE  
TRANSFECTION FOR TISSUE IMAGING AND THERAPY  
Our File : A894605US  
Date : August 26, 2003

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United States of America 20231

**Response to Notice of Non-Compliant Amendment  
(Voluntary Revised Practice)**

Dear Sir:

In response to the Notice of Non-Compliant Amendment mailed August 1, 2003, and further to our amendment dated July 15, 2003, please find enclosed a complete listing of all of the claims in the format as set out in the February 25, 2003 OG Notice.

Respectfully submitted,

D. Doak Horne  
Registration No. 33,105

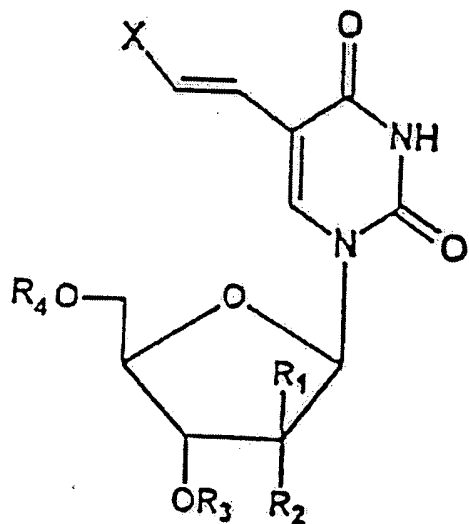
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[CAL\_LAW\961049\1]

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. (Original) A method for monitoring the transfer of a foreign gene throughout a population of cells, comprising the following steps:
  - (a) selecting a foreign gene which has been isolated from a cell or virus and which has been transferred into the population of cells;
  - (b) selecting a labelled compound which will interact selectively with a protein expressed by the foreign gene to produce a labelled product and which has a rate of expulsion from the cells which is greater than a rate of expulsion from the cells of the labelled product;
  - (c) administering to the cells an effective dose of the labelled compound such that the labelled compound selectively interacts with the protein to produce the labelled product;
  - (d) waiting a period of time such that a substantial amount of the labelled compound has been expelled from the cells and such that a detectable amount of the labelled product remains within the cells; and
  - (e) determining the extent and location of the protein throughout the population of cells by detecting the labelled product.
2. (Original) The method as claimed in claim 1, further comprising the steps of isolating the selected foreign gene from a cell or virus and transferring the isolated foreign gene into the population of cells.
3. (Original) The method as claimed in claim 1, wherein the protein expressed by the foreign gene is not naturally occurring within the cells.
4. (Original) The method as claimed in claim 1, wherein step (d) is comprised of non-invasively detecting the labelled product.

5. (Original) The method as claimed in claim 4, wherein the labelled compound is a radiolabelled compound which interacts with the protein expressed by the foreign gene to produce a radio labelled product which can be detected using nuclear medicine imaging techniques.
6. (Original) The method as claimed in claim 5, wherein the foreign gene is a gene selected from eucaryotic or procaryotic cells.
7. (Original) The method as claimed in claim 5, wherein the foreign gene is selected from a virus.
8. (Original) The method as claimed in claim 7, wherein the foreign gene is selected from the group of viruses consisting of herpes simplex virus, human cytomegalovirus, varicella zoster virus and Epstein-Barr virus.
9. (Original) The method as claimed in claim 8, wherein the foreign gene is a gene which expresses herpes simplex virus thymidine kinase.
10. (Original) The method as claimed in claim 9, wherein the radiolabelled compound is a compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein X is a radioactive halogeno substituent, wherein R<sub>1</sub> is a hydrogen, hydroxyl or fluoro substituent, wherein R<sub>2</sub> is a hydrogen or fluoro substituent, wherein R<sub>3</sub> is a substituent selected from the group consisting of hydrogen, arylcarbonyl, heteroarylcarbonyl, heterocyclocarbonyl, 1-methyl-1,4-dihydropyridyl-3-carbonyl, 3-7C cycloalkylcarbonyl, and alkylcarbonyls with a straight or branched chain having from 1 to 8 carbon atoms, and wherein R<sub>4</sub> is a substituent selected from the group consisting of hydrogen, arylcarbonyl, heteroarylcarbonyl, heterocyclocarbonyl, 1-methyl-1,4-dihydropyridyl-3-carbonyl, 3-7C cycloalkylcarbonyl, and alkylcarbonyls with a straight or branched chain having from 1 to 8 carbon atoms.

11. (Original) The method as claimed in claim 10, wherein X is a radioactive halogeno substituent selected from the group consisting of <sup>123</sup>I, <sup>124</sup>I, <sup>131</sup>I, <sup>75</sup>Br, <sup>76</sup>Br and <sup>18</sup>F.

12. (Original) The method as claimed in claim 11, wherein X is <sup>123</sup>I.

13. (Original) The method as claimed in claim 10, wherein X is a radioactive halogeno substituent selected from the group consisting of <sup>123</sup>I, <sup>124</sup>I and <sup>131</sup>I.

14. (Original) The method as claimed in claim 13, wherein R<sub>1</sub> is hydrogen, wherein R<sub>2</sub> is hydrogen, wherein R<sub>3</sub> is hydrogen, and wherein R<sub>4</sub> is hydrogen.

15. (Original) The method as claimed in claim 14, wherein X is <sup>123</sup>I.

16. (Original) The method as claimed in claim 13, wherein R<sub>1</sub> is hydrogen, wherein R<sub>2</sub> is hydrogen, wherein R<sub>3</sub> is 1-methyl-1,4-dihydropyridyl-3-carbonyl, and wherein R<sub>4</sub> is hydrogen.

17. (Original) The method as claimed in claim 16, wherein X is <sup>123</sup>I.

18. (Original) The method as claimed in claim 13, wherein R<sub>1</sub> is hydrogen, wherein R<sub>2</sub> is fluorine, wherein R<sub>3</sub> is hydrogen, and wherein R<sub>4</sub> is hydrogen.

19. (Original) The method as claimed in claim 18, wherein X is <sup>123</sup>I.

20. (Original) The method as claimed in claim 13, wherein R<sub>1</sub> is hydrogen, wherein R<sub>2</sub> is fluorine, wherein R<sub>3</sub> is 1-methyl-1,4-dihydropyridyl-3-carbonyl, and wherein R<sub>4</sub> is hydrogen.

21. (Original) The method as claimed in claim 20, wherein X is  $^{123}\text{I}$ .
22. (Original) The method as claimed in claim 13, wherein  $\text{R}_1$  is fluorine, wherein  $\text{R}_2$  is hydrogen, wherein  $\text{R}_3$  is hydrogen, and wherein  $\text{R}_4$  is hydrogen.
23. (Original) The method as claimed in claim 22, wherein X is  $^{123}\text{I}$ .
24. (Original) The method as claimed in claim 13, wherein  $\text{R}_1$  is fluorine, wherein  $\text{R}_2$  is hydrogen, wherein  $\text{R}_3$  is 1-methyl-1,4-dihydropyridyl-3-carbonyl, and wherein  $\text{R}_4$  is hydrogen.
25. (Original) The method as claimed in claim 24, wherein X is  $^{123}\text{I}$ .
26. (Original) The method as claimed in claim 13, wherein  $\text{R}_1$  is hydroxyl, wherein  $\text{R}_2$  is hydrogen, wherein  $\text{R}_3$  is hydrogen, and wherein  $\text{R}_4$  hydrogen.
27. (Original) The method as claimed in claim 26, wherein X is  $^{123}\text{I}$ .
28. (Original) The method as claimed in claim 13, wherein  $\text{R}_1$  is hydroxyl, wherein  $\text{R}_2$  is hydrogen, wherein  $\text{R}_3$  is 1-methyl-1,4-dihydropyridyl-3-carbonyl, and wherein  $\text{R}_4$  is hydrogen.
29. (Original) The method as claimed in claim 28, wherein X is  $^{123}\text{I}$ .
30. (Original) The method as claimed in claim 10, wherein at least one of  $\text{R}_3$  and  $\text{R}_4$  is hydrogen.
31. (Original) The method as claimed in claim 10, wherein  $\text{R}_4$  is hydrogen.
32. (Cancelled) A use of a labelled compound to monitor the transfer of a foreign gene throughout a population of cells, by selecting a foreign gene which has been isolated from a cell or virus and which has been transferred into the population of cells, selecting a labelled compound which will interact selectively with a protein expressed by the foreign gene to produce a labelled product and which has a rate of expulsion from the cells which is greater than a rate of expulsion from the cells of the labelled product, administering to the cells an effective dose of the labelled compound such that the labelled compound selectively interacts with the protein to produce the labelled product, waiting a period of time such that a substantial amount of the labelled compound has been expelled from the cells and such that a detectable amount of the

labelled product remains within the cells, and determining the extent and location of the protein throughout the population of cells by detecting the labelled product.

33. (New) A method of using a labelled compound to monitor the transfer of a foreign gene throughout a population of cells, comprising:

- (a) selecting a foreign gene which has been isolated from a cell or virus and which has been transferred into the population of cells;
- (b) selecting a labelled compound which will interact selectively with a protein expressed by the foreign gene to produce a labelled product and which has a rate of expulsion from the cells which is greater than a rate of expulsion from the cells of the labelled product;
- (c) administering to the cells an effective dose of the labelled compound such that the labelled compound selectively interacts with the protein to produce the labelled product;
- (d) waiting a period of time such that a substantial amount of the labelled compound has been expelled from the cells and such that a detectable amount of the labelled product remains in the cells; and
- (e) determining the extent and location of the protein throughout the population of cells by detecting the labelled product.